Google

Google Fitbit

+

Population Health Research

Prof Cathy Speed

Senior Clinical Specialist

Clinical Lead, Research

Devices, Services, Platforms & Ecosystems

speedc@google.com

Google

Google Health

Google

fitbit

Google Cloud

Nest

Google DeepMind

Google Health

Google Research

YouTube

AndroidHealth

Google

Google Health

Google Fitbit Ecosystem (Devices & Platforms)

Devices that measure continuous, real world biometric data at scale, enabling diverse research ranging from population health research to digital intervention studies.

Integrated Platforms that ensure secure and interoperable data accessibility.

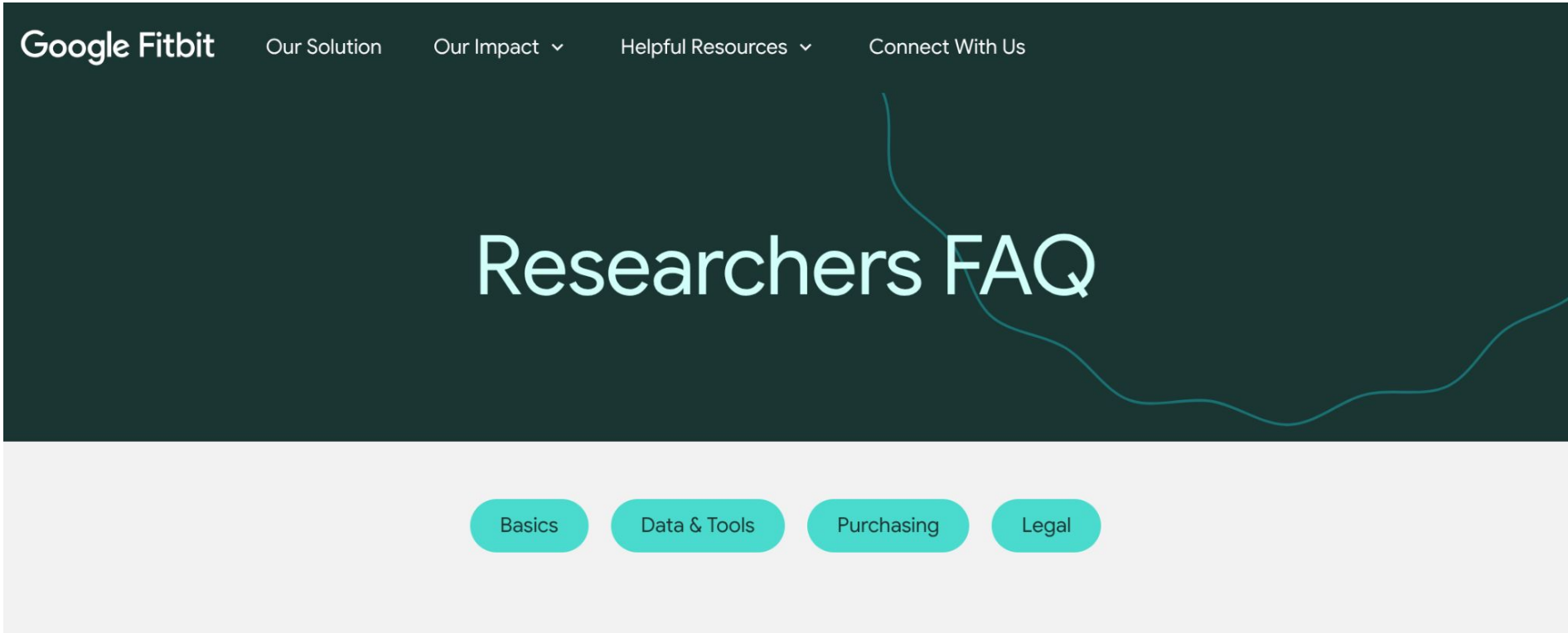
Google Fitbit Our Solution Our Impact Helpful Resources Connect With Us

Powering Health & Wellness Research

Fitbit makes conducting research easier for you and more engaging for your participants.

enterprise.fitbit.com/researchers

Google



https://enterprise.fitbit.com/researchers/faqs/#data-&-tools

Wearables

128M registered users

38.5M active users

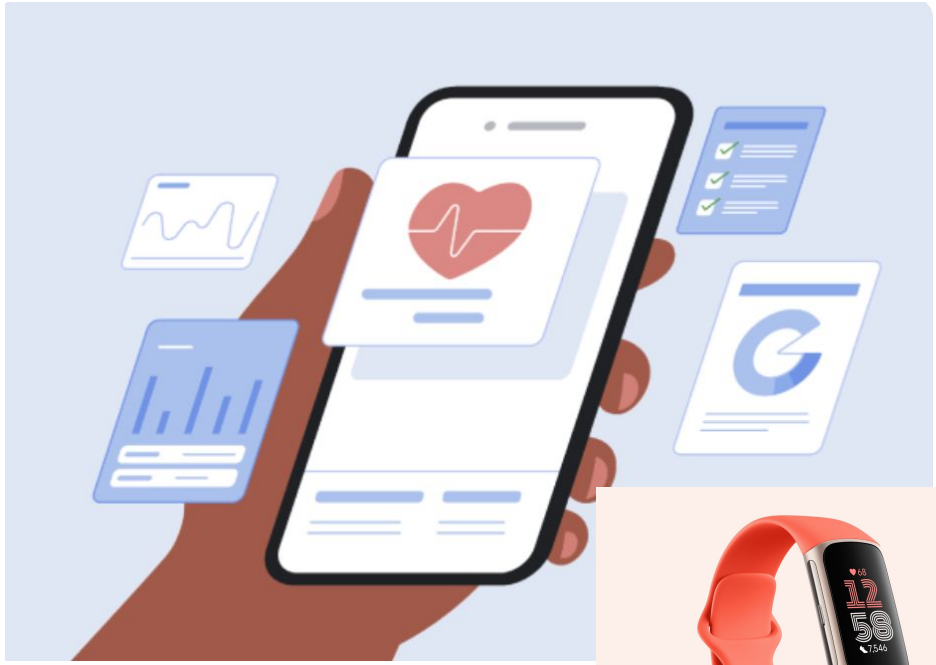
Wearables

128M registered users

38.5M active users

>1700 published research studies

Pixel Phone



- Smartphone health sensors
- Surveys
- Interactions

“Better together”

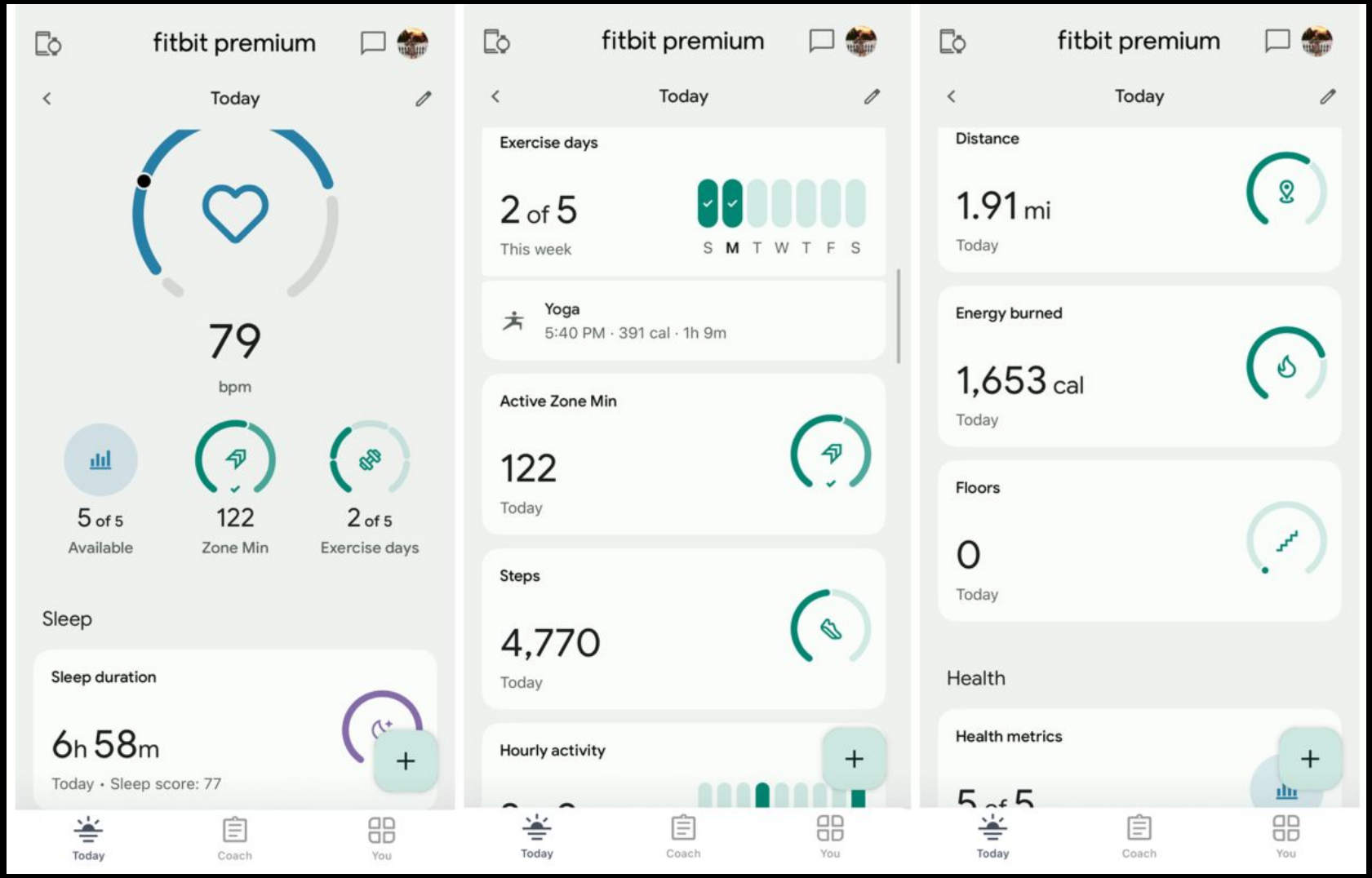
health.google/health-research/mobile-sensing

Metrics

Google Fitbit devices provide a range of health metrics, largely based on movement and heart rate

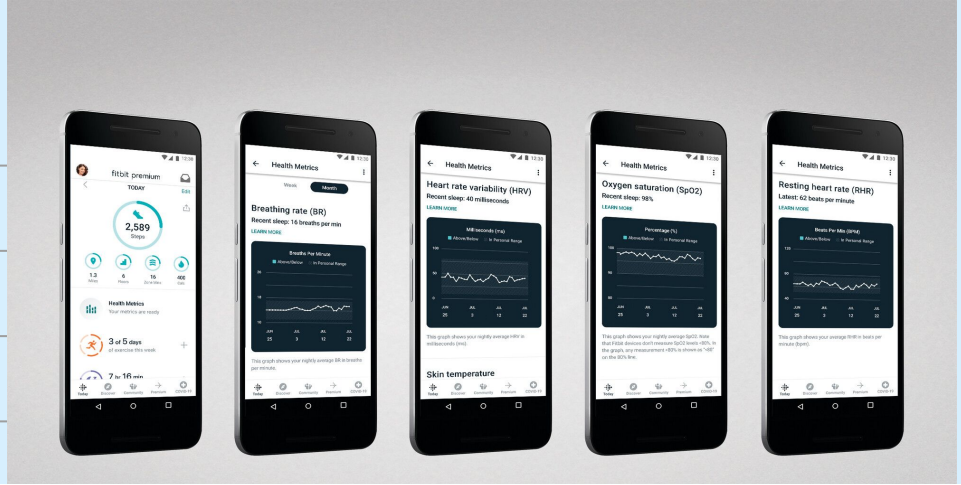
Connected smartphones offer additional data collection capabilities: “Better Together”

Google


fitbit premium
Today
79
bpm
5 of 5
Available
122
Zone Min
2 of 5
Exercise days
Sleep
Sleep duration
6h 58m
Today • Sleep score: 77
Today
Coach
You
fitbit premium
Today
Exercise days
2 of 5
This week
S M T W T F S
Yoga
5:40 PM · 391 cal · 1h 9m
Active Zone Min
122
Today
Steps
4,770
Today
Hourly activity
Today
Coach
You
fitbit premium
Today
Distance
1.91 mi
Today
Energy burned
1,653 cal
Today
Floors
0
Today
Health
Health metrics
Today
Coach
You

Metrics

Domain	Metrics
Movement	Steps
	Floors
	Activity recognition
	Hourly activity
Heart rate	Continuous HR
	Resting HR
	HRV
	Active Zone Minutes (MVPA)
	Cardio Load (Activity: low to max intensity)



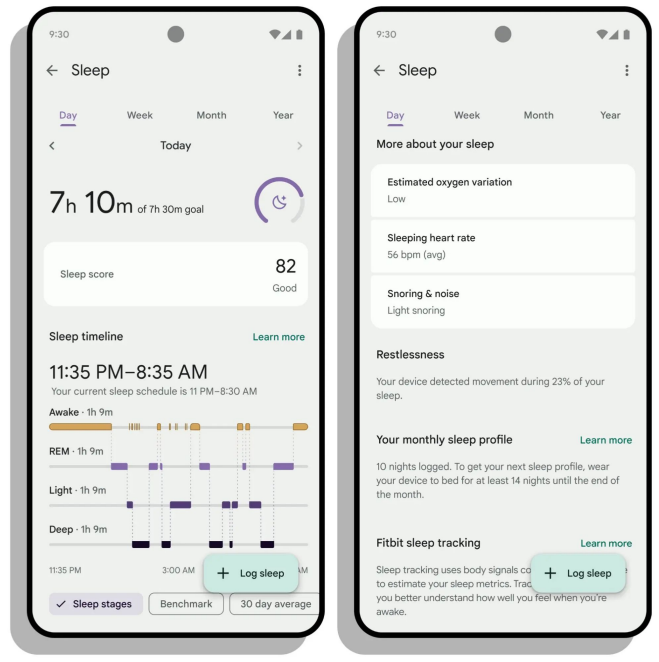
fitbit

Fitbit Web API Data Dictionary

Google

Metrics

Domain	Metric
Sleep	Score
	Duration
	Latency
	Stages
Others	Skin temp
	SpO2
	Breathing rate
	Calories burned



fitbit

Fitbit Web API Data Dictionary

Data Collection

Secure, scalable and privacy-conscious data access is facilitated through API driven solutions:

- Fitbit Web API,
- Health Connect,
- Fitabase

Google

Data Collection (1): The Fitbit Web API

The Fitbit Web API allows researchers/developers to access and interact with data from Fitbit Google devices and services, facilitating integration of health data into 3P applications.

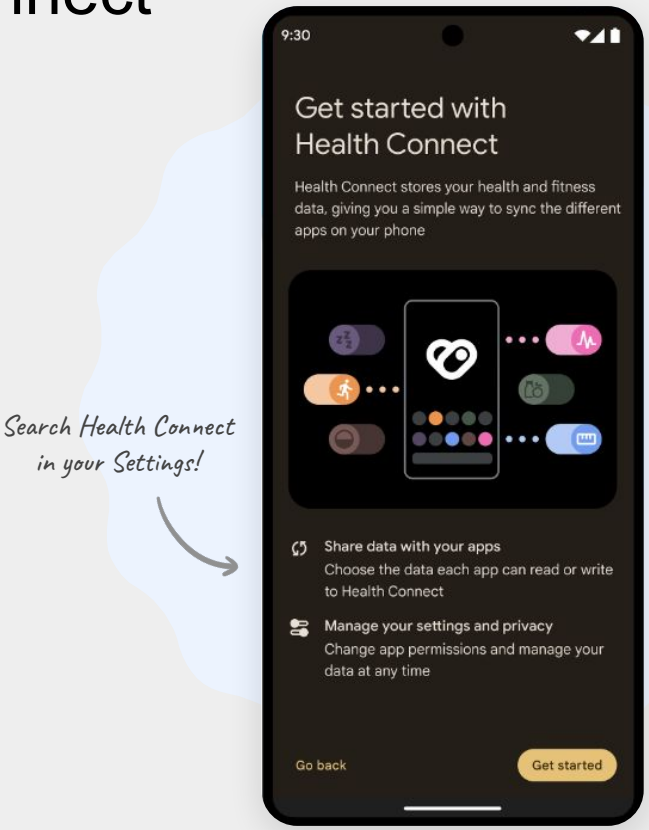
Register your Study App → Obtain User consent → Obtain Access Token → Retrieve data → Refresh tokens → Store & analyze

https://dev.fitbit.com/build/reference/web-api

https://enterprise.fitbit.com/researchers/faqs/#data-&-tools

Data Collection (2): Health Connect

- On device storage of an individual's health and fitness data in one place
- 1P and 3P devices
- User centric permissions
- Consolidation across Android
- Standardised data schema
- Supported data types: Activity, Sleep, Vitals, Nutrition, Cycle tracking, Basic body measures

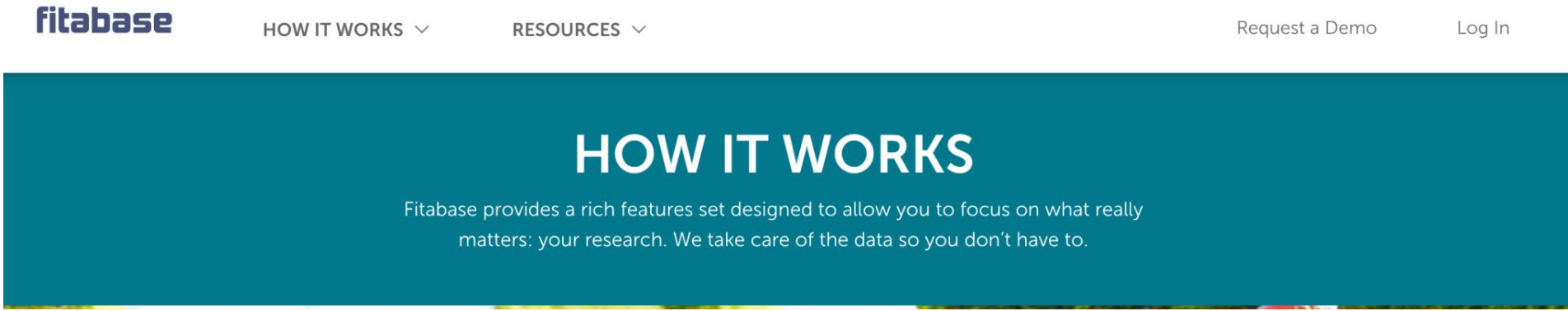


developer.android.com

AndroidHealth

Proprietary + Confidential

Data Collection (3): Fitabase



https://fitabase.com/how-it-works/

Wider Ecosystem

Google Health

Google Cloud

fitbit

Nest

Better health doesn't happen alone

Google DeepMind

YouTube

AndroidHealth

Data organisation + storage

Powerful Analytics

Extensive AI tools

Collaboration

Fast Facts

Ecosystem

Google Fitbit devices provide continuous, real world biometric data at scale, suitable for diverse research needs. Secure interoperable platforms offer data accessibility

Metrics

Google Fitbit wearable devices provide a range of health metrics, largely based on movement and heart rate

Data Collection

Secure, scalable and privacy-conscious data access is facilitated through API driven solutions

Broader Tools

The wider Google ecosystem supports data storage, analytics, predictive tools… and more

Links

enterprise.fitbit.com/researchers

developer.android.com

https://dev.fitbit.com/build/reference/web-api

https://fitabase.com/how-it-works/

https://cloud.google.com/solutions/healthcare-life-sciences